UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/936,160	09/10/2001	Akiyoshi Kabe		9208

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Sughrue Mion Zinn
Macpeak & Seas
2100 Pennsylvania Avenue NW
Washington, DC 20037-3202

EXAMINER
RUTTEN, JAMES D

ART UNIT	PAPER NUMBER
2122	

DATE MAILED: 01/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communicati n appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 October 2004*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

  4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

  a)☐ All b)☐ Some * c)☐ None of:

  1.☐ Certified copies of the priority documents have been received.

  2.☐ Certified copies of the priority documents have been received in Application No. _____.

  3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
  application from the International Bureau (PCT Rule 17.2(a)).

  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
  Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

1.   Acknowledgement is made of Applicant's amendment dated 10/14/2004, responding to

the 07/15/2004 Office action provided in the rejection of claims 1-10, wherein claims 1-8 and 10

have been amended, no claims have been canceled, and no new claims have been added. Claims

1-10 remain pending in the application and have been fully considered by the examiner.

2.   Applicant's arguments with respect to claims 1-10 have been considered but are moot in

view of the new ground(s) of rejection.

3.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

Response to Arguments

4.   Applicant argues on page 9 of the response that SNAP does not disclose a control system

or a group of devices. This argument is not convincing. SNAP discloses a development

environment for generating computer software programs. Computer software is essentially a

control system for controlling the devices of a computer. Thus the SNAP's computer software

development environment inherently generates control system software controlling computer

devices.

5.   In response to applicant's argument that the references fail to show certain features of

applicant's invention, it is noted that the features upon which applicant relies (i.e., "a group of

external devices" at the bottom of page 9 of the response) are not recited in the rejected claim(s).

Although the claims are interpreted in light of the specification, limitations from the specification

are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir.

1993).

6.   Applicants arguments on pages 10 and 11 are based upon the arguments against the

SNAP reference which are addressed above.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

8.   Claims 1-5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over prior

art of record "Using the SNAP Development Environment" by Template Software (hereinafter

referred to as "SNAP") in view of U.S. Patent 6,173,438 to Kodosky et al. (hereinafter

"Kodosky").

In regard to claim 1, SNAP discloses:

A programming device (page 2-2 paragraph 1: "The SNAP Development

Environment") *comprising:*

a group of program generation tools to generate program for each of a plurality

of devices that form part of a control system; (page 3-11: "The tools that

appear in the tool box are listed in Table 3-7."; also Figure 3-3

on page 3-14 shows a control system) *and*

a data sharing unit (page 3-14: "Object Model Editor workspace"

shown in Figure 3-3) *adapted to share a variable name* (page 3-15 Figure 3-4

"BINDING REF") *and attribute data definitions* (page 3-15: "The symbol that

represents a class can contain several graphic indicators."

Shown in Figure 3-4) *corresponding to an object of each of said plurality of devices,*

wherein the objects are shared by said program generation tools. (Objects are

shared in the workspace and can be acted upon by the tools in the tool box.)

SNAP does not expressly disclose controlling a group of machines. However, in

an analogous environment, Kodosky teaches the use of an instrumentation control

system. See column 7 lines 52-54: "The computer 102 connects through

the one or more instruments to analyze, measure or control

a unit under test (UUT) or process 130." It would have been obvious

to one of ordinary skill in the art at the time the invention was made to use Kodosky's

teaching of a control system for a group of machines with SNAP's program generation

tools. One of ordinary skill would have been motivated to simplify the operation of a group of machines by using a computer system (Kodosky column 1 lines 62-66).

As per claim 2, the above rejection of claim 1 is incorporated. SNAP further discloses:

Programming action in one of the program generation tools acts as a trigger to store a setting of the object to the data sharing unit together with an indication of the program generation tools which is a reference object (page 3-11 Table 3-7 describes the "New Relation Attribute" tool which is inherently stored as an indication of a reference object in the workspace and also stores relation attributes in the workspace.), *and*

the sharing of said object with other program generation tools other than said one of the program generation tools notifies said object to the program generation tools other than said one of the program generation tools (Since objects are created and modified with the Object Model Editor tools, the object is inherently notified of the existence of the tools.).

As per claim 3, the above rejection of claim 1 is incorporated. SNAP further discloses: *an object data definition unit adapted to perform data definition and data changing of the objects shared in the data sharing unit, wherein all objects involved in the object sharing are totally managed* (page 3-11 describes the Object Model Editor tools which provide for object data definition and management).

As per claim 4, the above rejection of claim 1 is incorporated. SNAP further discloses: *a system configuration tool, being registered with a subset of objects, said subset of said objects being basic type objects having a high frequency of use in the devices in the control system, the system configuration tool being adapted to select an object from the basic types objects to be actually used in the control system* (page 3-20: "Displaying predefined classes").

As per claim 5, all limitations have been addressed in the above rejections of claims 1 and 2.

As per claim 10, SNAP discloses:

A programming method (page 2-2) *for generating programs for devices forming part of a control system to control a group of machines, the method comprising:*

according to a pre-designed virtual object (page 3-11 as disclosed in claim 1),

defining an object name and attribute data corresponding to an object of each of the devices forming part of a control system (page 3-11 Table 3-7 as cited in claim 1),

specifying a device that will use the object (pages 2-5 and 2-6: "Creating an application in a UNIX or VMS environment", and "Creating an application in an MS Windows environment". These pages describe the specification of 3 separate devices.), *and*

registering the information in a data sharing unit (page 3-14 as cited in claim 1);

> *notifying the object to a program generation tool for the specified devices that*
>
> *will use the object* (This is inherent as described in claim 2); *and*
>
> *according to the objects registered in the data sharing unit, performing*
>
> *programming of the device by the notified program generation tools* (page 3-11 Table 3-
>
> 7, e.g. "New Inheritance").

All further limitations have been addressed in the above rejection of claim 1.

9.   Claims 6, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over SNAP

and Kodosky as applied to claim 5 above, and further in view of U.S. Patent 5,907,705 to Carter

(hereinafter referred to as "Carter").

As per claim 6, the above rejection of claim 5 is incorporated. SNAP does not

expressly disclose information about whether or not the object is referenced by program

generation tools other than said one of the program generation tools that are registered as

using the object are notified.

However, in an analogous environment, Carter teaches notifying users of an

object when the object is changed (column 4 lines 55-59). It would have been obvious to

one of ordinary skill in the art at the time the invention was made to use Carter's teaching

of notification in SNAP's workspace. One of ordinary skill would have been motivated

to alert any potentially impacted user or tool of changes in an object.

As per claim 8, all limitations have been addressed in the above rejection of claim 6.

As per claim 9, the above rejection of claim 6 is incorporated. SNAP further discloses: *wherein the object is notified to a storage area which is confirmed by the program generation tools when they are started* (page 2-4: "`Creating an application`". This passage describes the process of searching a storage area for an application. This inherently suggests notification of a storage area, otherwise there would be nowhere to search.).

10.   Claim 7 rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of SNAP, Kodosky, and Carter as applied to claim 6 above, and further in view of "Linkers & Loaders" by Levine (hereinafter referred to as "Levine").

As per claim 7, the above rejection of claim 6 is incorporated. SNAP does not expressly disclose *a detection unit adapted to detect any overlap at a referenced part among the objects when a program is generated by the program generation tools other than said one of the program generation tools.*

However, in an analogous environment, Levine teaches that programs can be created from multiple subprograms, but that the subprograms have to be loaded at non-overlapping addresses (page 5 bullet 2: "`Relocation`"). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Levine's

teaching of non-overlapping subprograms in SNAP's program generation device. One of

ordinary skill would have been motivated to protect the integrity of each object by

separating their address space.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to J. Derek Rutten whose telephone number is (571) 272-3703. The

examiner can normally be reached on M, T, Th, F 6:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jdr

TUAN DAM
SUPERVISORY PATENT EXAMINER